/61 cont./

245 year and then transplanted, or the seeds are planted directly. The trees are planted from seven to eight ch'ih apart; if they are too close it is injurious to their growth. Although both spring and winter are suitable for planting the tung tree, winter is preferred. The newly reclaimed mountain land 243 still can be also planted with mixed cereals before the tung 245 trees have grown to any great height, for the tung tree planted the previous winter already has sprouts aboveground in the spring, and at weeding time injury to the tung reeds in the ground can be avoided. After two or three years the tung grove cannot be used to grow any more mixed cereals, and has to be weeded constantly in order to facilitate their growth. Otherwise they are liable to die. After four years the trees 245 gradually begin to produce seeds, increasing year by year; and after six or seven years all of them are producing. They blossom in the third month of the year, and harvesting is done [805] in the eighth or ninth month, after the "Cold Dew /a solar [482] term from October 8-22/." At harvest time the Miao go in groups up the mountain to pick the tung seeds. Men balance bamboo baskets on their shoulders, and the women carry them on their backs. /Illustrations 32-35 on pp. 62-65/ /66/ If the tree is high they hit the branches with long bamboo poles to make the seeds fall down and then pick them up. If the •[412] tree is short, they use iron hooks to get them. When the baskets are full they put them into baskets and carry them home. They put the seeds under the eaves or any damp place [258] to enable them to absorb moisture. After a month or two the [439] outside of the seeds become black, and then they flay the seeds, which are sold for the extraction of oil. The hulls are [252] burned into ashes, which can be used in place of soda.

The planting of the tea plant is comparatively easier than that of the tung tree, except that while the tea plant is still a seedling it is necessary to stick pine branches on the sides to shade it from the sun. Otherwise the seedlings are liable to be killed by the sun. Or one can delay the weeding of the field for six or seven months so that the various weeds can

[text continues on p.95]

/66 cont./

245 prevent the seedlings from withering. According to the Miao the tea plant is very sturdy and can resist the cold. It blooms in the ninth and tenth months, the flowers being white in color, and fading in the eleventh month. After the second and third [262] months, "blisters /p'ao/" form, which can be picked and eaten. [443] They taste sweet and sour, and are often sold by the Miao [439] women at the market place. During the seventh and eighth months the fruits ripen, and after being picked they are dried in the sun for three or four days. They split open themselves, disgorging two or four seeds. The seeds also must be dried in [258] the sun in order tomake them dry and crisp, so that they will not get wormy and to insure a lot of oil when expressed.

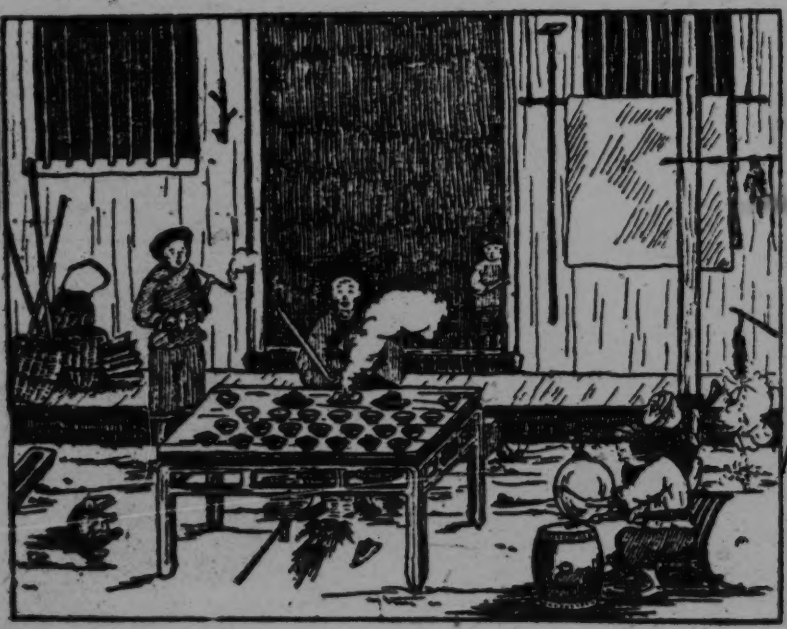
258 Tung and tea seeds both yield oil. The Miao sell these [439] seeds to the Chinese oil stores, few Miao people expressing the oil themselves. The few who do express tea oil still use a local [412] method. The sun-dried tea seeds are pounded into bits in a mortar. Then they are dry-fried in a pan. Then water is added and brought to a boil. As bubbles of oil float on the surface of the boiling water, they are scooped out with an iron ladle and [415] placed in a bowl. The bubbles of oil are heated again to make the water evaporate, and the residue is tea oil. The residual paste of the tung or tea seeds after the oil has been expressed [241] is called tung paste or tea paste respectively. The tung paste [388] can be used as fertilizer. The tea paste can be used as soap [226] for laundry and also can be ground into powder to be thrown into the river to cause fish to suffocate so that they can be caught easily.

314 Wild indigo plants grow abundantly everywhere in the Miao [249] area. Although the Miao know how to cultivate indigo plants, they also gather wild indigo for dyeing. Wild indigo plants are one to two kung ch'ih in height. A big one has a stalk as thick as a man's thumb, a lone plant without any side branches, reaching toward the sky. The leaves are small and oval in shape, and contain a great deal of indigo. Every year in the eighth and ninth months when the weather is still warm and before the frost comes, the indigo leaves are at their most luxuriant. The Miao go out in numbers to pick wild indigo leaves.

/132 cont./

[782] they spread seven bowls each of wine, cooked rice, and water-buffalo meat, a bowl of tea, and a bowl of sour soup. Altogether there are 23 bowls. In addition they put out two large bowls of water-buffalo meat, and place beside the table a live pig, whose four legs are tied up. On the outside wall of the house is hung a red rug. /Illus. 59 appears here./ /133/ A spear piercing a piece of wood stands upside down on the ground beside the blanket. The sorcerer-priest sits down at the right side, holding a double-edged sword in the right hand, a sheaf of t'u-t'ou-pai-yeh in the left, and a bracelet. He utters an incantation, while attendants hold the [788] wine pot and pass the wine, blow the signal horn, beat the gong and drum, and set off firecrackers, as in Illus. 59. First, seven strings

[342] [352] [415] [412] [291]



Illus. 59. Eating Pigs, A.

*782 /148 cont./

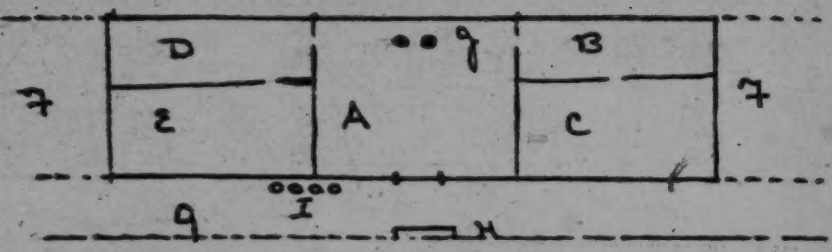
affairs elsewhere, do not go until I have finished speaking, and then you may disappear with the smoke from the wax. I ask you to protect the host that he may be blessed with peace and long life; protect his descendants, his animals, his wealth and happiness, so that everything may be completely protected!"

The third part is repenting [tɕɥ mie4]. While performing this the sorcerer-priest stands in the middle of the house, facing the entrance. A rectangular bench is used, on which are spread five bowls of wine and five pieces of meat. The Miao [412] sorcerer holds a kitchen chopper in his hand, with the edge down, chopping right and left in the same cadence as the beating of the bamboo tube, and utters an incantation:

"The sorcerer-priest stands inside the entrance, performing. Helpers have set out the bowls of wine and pieces of meat on the bench. The paper money, the axe, the iron knife, the scissors, and the comb are all in readiness. Will the kuei please take these. After receiving these useful articles please partake of the food slowly. I take the knife and sharpen it quickly against the stone, not to chop off benefits to the host, but to break the fetters of the kan lo kuei. Please eat five pieces of good meat, and drink five bowls of good wine. The host in the ordinary course of events has taken a vow and drunk blood. Today I request you to pardon him, and all the various misfortunes to go with the chopping of this knife. [pʻiɪ ɕia4] (a sound to frighten the kuei). When the host walks over this knife, he will then have peace and no trouble. The former grievances between the host and any others are today all relegated to the enemy [pʻiɪ ɕia4]. The large golden knife splits open a bright main road; the small golden knife opens a bright path."

3: Moninger E-5 (no date) 1921 AE5 Miao AE5

342



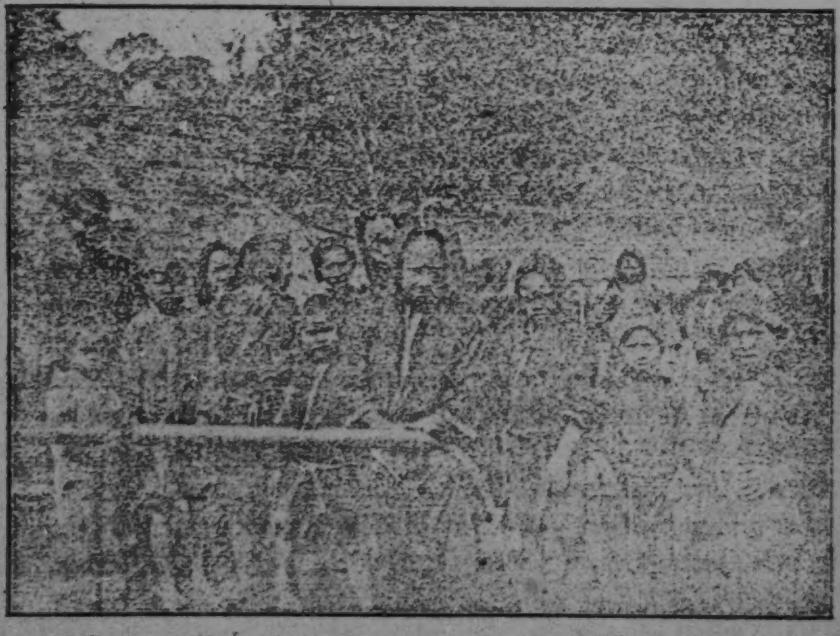
A—Living Room.
B—Parents' Room.
C—Rice Room.
D—Daughters' Room.
E—Sons' Room.
Used for various purposes.
F—Shelter for wood, etc.
G—Front verandah.
H—Pig trough.
I—Chicken coops.
J—Fire place.

I have seen one or two houses where there were three and four main entrances to the front verandah.

412
415

The utensils and implements used by the Miao are of the simplest. Rude iron hoes, heavy knives and the clumsy iron skillets are purchased from the Hainanese traders. Sometimes the skillets are lacking and the rice is steamed

291



A GROUP OF MIAO WOMEN AND CHILDREN GATHERED ROUND THE PIPE THAT CARRIES THE WATER TO THE VILLAGE FROM A STREAM ABOVE.

3: Manager E-5 (no date) 1921 AE5 Miao AE5

in hollowed-out tree trunks lined with leaves of the wild banana. Every man has his hunting knife, carried in a wicker pouch at his back. The chopping knives for clearing the forest are heavier. Every family seems to have at least one gun, a clumsy, heavy, old-fashioned type, used in hunting. The pig trough is a hollow log, the family wash-basin a cross section of a big tree rudely scooped and hollowed out. The rice mortars too are cross sections of trees, and the mallets are wooden, not even stone-tipped, in most cases. The ever-present bamboo and rattan make the rice sieves, the woven baskets used as chicken coops, the beds, and the little baskets swung from the roof beam, in which the baby is put when it is not on its mother's back or in a hammock-like piece of cloth. The fishnets are woven of the native hemp, as are the bags which the women swing across their backs and use to carry corn, sweet potatoes, other tubers, or anything they happen to wish to move. Water is carried in rude wooden buckets, possibly in kerosene tins, if a family has somehow come into possession of such articles, in small earthenware jars, or in three foot length sections of large bamboo. These latter are used if the water must be gotten from a very shallow stream, as three or four of them lashed together hold almost as much as a bucket and can be laid down flat in the stream. Clothes are washed at the river side, on flat stones.

The people make their living by farming, depending on hunting and fishing to supplement their food supply. Different from the Chinese, they know nothing of fertilizing their fields except by the use of wood ashes. Neither do they know how to raise rice in paddy fields, but plant only the upland glutinous rice, of which they have ten or eleven varieties, most of them white. They clear the steep mountain sides by cutting out some of the brush and smaller timber, burn off the place, dig up the ground with their small hoes, and raise two or three crops of rice, maize, and sweet potatoes. When the rice is ripe it is cut and bound in small bundles. These bundles are placed in racks under thatched roofs to dry and sweat and later stored in the rice rooms in the houses, and beaten out and pounded as needed. When the fertility in one place is exhausted they go to another hillside and repeat the process. When all the hillsides within easy distance (what they call "easy distance" would be four hours' walk for a foreigner) are used up they have no recourse but to move their whole village, so move they do. One advantage of course is that the housewife does not need to clean her domicile, and the smoky, grimy house of several years' use can well be left—but it is a bitter life,

4:Mickey E-5 (1940-?) 1947 AE5 Miao AE5

on a bench or on top of the cupboard), jars of rice wine, and a bean mill. On the walls hung scythes for cutting wood, carrying poles, carpenter's tools, a wicker basket of chopsticks, skeins and balls of hemp thread, small jars of oil, and sometimes a water pipe. Leaning against the wall were pipes with long bamboo stems, bundles of faggots and carrying poles with baskets on either end. In a well-to-do home pieces of meat hung from the rafters. Lamps were the ordinary pottery saucer with pith wicks and vegetable or t'ung oil fuel. They were suspended by a wire from the rafters or set on an iron stand. For lighting the way or borrowing fire thin pieces of wood tipped with sulfur, small bundles of straw, or a few strips of bamboo were used. Generally speaking, the objects found in these villages were not for comfort but rather for utility and convenience.

Every home had a shrine to "Heaven, earth, rulers, relatives, and scholars," which was merely the inscription in Chinese characters on red paper pasted up on the wall facing the door, with appropriate sentiments on other strips on either side. In some homes there was also a shelf the full width of the room — the main hall, if there was one — with these inscriptions above and holders for incense, candles and other objects for worship on it. After the old man in the family in which I lived died a square table was set up in one corner of the main room with cloth forming a third side. On the table were the ancestral tablet, figures and cones of mosaic, colored paper with pompoms of frilled paper on top, a support for incense sticks, and small dishes. Along the top and sides of the opening were inscriptions in Chinese. I saw this shrine, also, in two houses in Yang-niu-ts'un, while in a third home the open shelf above a cupboard was used for this purpose. Here the objects were an ancestral tablet, a lamp, a support for incense sticks, and a gong. At dusk, as in Chinese Buddhist homes, they set in new, lighted incense sticks and beat the gong several times.

This main hall was not lived in as much as other rooms of the house, but according to the season the large bamboo mats used on the threshing floor, bamboo baskets for grain, various implements — plows, harrows, grain-

4:Mickey E-5 (1940-?) 1947 AE5 Misc AE5

cleaning machines, flails—other baskets and trays were kept there (see fig. 13, *b-e*). During the rice harvest it was often piled full of grain until there had been enough sunny days to get it all sunned and stored or sold. When an adult died, the coffin was always set in this room with the foot toward the door. At the lunar New Year glutinous rice paste was pounded in a stone mortar and the cakes shaped in this room. Of course offerings were made here to ancestral spirits and to the gods of the household.

Food. The basis of their diet, like that of the Chinese in the district, was white rice. Except for a short time directly after a good rice harvest, this was mixed with beans or whole wheat flour in tiny balls. With it they ate cooked green vegetables from their own gardens, highly seasoned with salt and hot red or green chillies, fresh or dried. Their gardens had a succession of the following vegetables: turnips, celery, carrots, celery cabbage, spinach, white and sweet potatoes, lettuce root, rape, mustard, various kinds of beans and peas, maize, cucumbers, onions, garlic, leeks, and various other roots. In May, for instance, there were new potatoes, peas, and broad beans in the gardens and bamboo shoots in the thickets, in June green beans, rape leaves, and cabbage. Broth was made of dried beans and peas, and curd from soy beans. Nearly every family raised pigs. The pork was eaten both fresh and in the form of excellent smoked and cured meat and sausages. The blood was also mixed with bean curd and made into sausage. At rare intervals a cow was killed and the meat eaten fresh or dried. Now and then beef was brought into the village or bought in market. Of the bamboo two species were edible. In spring and fall bamboo shoots were much enjoyed. Potatoes were sliced very thin with the skins left on and fried. When corn was ripe it was eaten on the cob after being roasted in the hot ashes, or the kernels were mashed, wrapped in husks, boiled, and eaten from the husks. Persimmon and other pickles were made. If the water in the pond was not too deep in the spring, they dug for two kinds of water chestnut. Small fish were taken from the pond, either fished for with pole and line or caught in the hands as a large number of

4:Mickey E-5 (1900-?)1967 AE5 Miao AE5

241 462 with the exception of the fact that the Miao women seemed to do a greater proportion of the out-of-door work. That is, in a well-to-do Miao household the women worked just as hard as those in the poorer ones, but in a well-to-do Chinese family the women spent most of their time at home. The work of women will be discussed more in detail under Division of Labor.

241 412 The implements used were as follows: for breaking up and cultivation of the ground—plows, harrows, and mattocks. The plow (fig. 13, *d*) had an iron share like two overlapping shingles and one upright piece through the beam. The end of the beam was the handle. The harrow was two beams with iron spikes on the under side and a transverse piece at either end, the whole forming a rectangle with projecting ends. The mattock had a long, wooden handle and a blade of iron about six inches wide at the edge. The harness was a slightly bent wooden beam laid across the neck of the animal with a heavy rope from it under its neck and two light ropes to the implement. As the man plowed or harrowed he guided the animal by another cord attached to one side of the yoke. The plow had to be lifted a little when turning corners. In use the harrow was weighted with a large stone. For reaping, gathering grass, and gathering fuel the sickle was used. It had a short wooden handle and an iron blade, originally with a straight cutting edge and rounded outer edge, but with much sharpening becoming a crescent. The men had a wooden holder of the shape as shown in figure 10 which they fastened with a straw cord about the waist to the small of the back. The handle of the sickle was thrust into the hole in the top of this with the blade up. A little bamboo basket for the whetting stone was worn at the belt in front. For beating out the grain they used a square wooden box, four feet each way and two deep, an upturned stone, a flail, bamboo baskets, and a bamboo mat. The beater took up a bundle of rice and beat out the grain on the inside of the box or against the upturned stone set on the mat. Or the sheaves were laid end to end and flailed. The flail was two lengths of bamboo or sticks fastened to a short piece in such a way that the worker could hold one length in her hands and swing the

4:Mickey E-5 (1940-?)1947 AE5 Misc AE5

other under, back, over and down (fig. 16, *d*). Two worked together sometimes, but not necessarily in rhythm. The woven baskets were shallow, with handles on the top of the rim through which a carrying pole was thrust and secured by wooden pegs. The bamboo mats in twilled pattern were as large as sixteen by nine feet. A two-inch bamboo pole was fastened to either end to help keep it flat while in use and then easily rolled up for storage.

Fig. 10. Wooden holder for sickle, front and side views.

Two types of basket had a great variety of uses. In a loosely woven one fertilizer was carried to the fields and bundles of rice plants taken from seed beds to fields (fig. 16, *e*). In closely woven ones grain and other crops were brought in (fig. 16, *c*, *f*). When grain was to be sunned it was brought out in these baskets to the mats on the threshing floor and at night it was carried back in them. In this case the worker usually used only one at a time and someone had to help her swing it up to one shoulder, where she held it by putting that hand on her hip. She steadied it with the other hand. In them grain and other produce were taken to market.

Bamboo scoops were used to lift the grain from mats to baskets and a piece of wood with one straight side and a long handle to push the grain around so that all might get the sun evenly. The grain was first spread evenly on the mat and the bits of straw, sticks, etc., swept out with the broom of twigs. This was done several times. After a while the grain was all swept to the edges to allow the center to dry thoroughly and then to the center to allow the edges of the mat to dry. After this the mat was folded over the pile until it was possible to get several people together to put the grain into the baskets and carry it to loft or granary. For more careful cutting of rice straw the women had a knife blade set in one side of a more or less fancy shaped piece of wood or bamboo. This could

4:Mickey E-5 (1940-?) 1947 AE5 Miao AE5

also be used for cutting the fibers from hemp stalks. Another small paring knife was used to separate the inner fiber from the thin bark. 241 412

For the hulling of grain (fig. 16, *b*) the following implement was used: A log shaped to a plank at one end and fitted with a pestle at the other lay between two posts set in the ground and was held straight by a log set in crosswise in front of them. There was a hole under the plank and one under the pestle. The grain was poured into the hole under the pestle. The operator stood with one foot on the ground and the other on the plank. As she pushed it up and down she swept the grain back into the hole with a small bamboo broom on a long handle. The chaff was sold in market.

For the cleaning of grain there was a wooden thresher set up on four legs, to a height of four and a half feet over all. Its essential elements were a hopper with two straight and two shorter, sloping sides, into which grain was poured from the top (fig. 16, *c*); a chute through which grain fell into a basket or onto a mat on the ground; another chute through which some grain mixed with chaff fell onto the ground; and a wheel with four blades, turned by a handle which stuck out as an extension of the axle. The end of the thresher opposite the wheel was open and chaff flew out through this. Until they began to turn the wheel, the hopper was kept closed by a partition controlled by a handle set in the side of the machine. All parts of this machine were of wood.

The iron parts of all implements were bought in market by the villagers, who dealt with certain Chinese workers in iron, or had them made by one of two blacksmiths in the *hsien* city. Carrying poles, yokes, and the wooden parts were also bought in market, as they were made by craftsmen skilled in their manufacture or of wood which the villagers did not have. But, as they had their own trees and bamboo, some wooden implements, wooden parts of tools, and all articles of bamboo except the small, covered basket carried on long trips were made in the village, either by the householder himself or by someone more skilled in the making of certain things. Thus, while I was there our family called in a Miao from another village to make 241 412 463 563

4:Mickey E-5 (1940-?) 1947 AE5 Miao AE5

water casks and buckets for carrying or raising water, a man from the same village to make bamboo scoops and baskets, and a Chinese carpenter to make two large, racheted water wheels for a mill. The old man who moved away from the village was a head carpenter, capable of directing the work of making and setting up the framework of a house, and also skilled in working with bamboo. One of his sons had this ability.

Other bamboo baskets were used to carry small pigs to market, to bring in green stuff from the garden, to carry in the heads of wheat, and for the storage of grain.

Animals and Birds. In the village of Yang-chia-sai there were just one female pony and her colt, which belonged to the wealthiest family and were used for the transportation of grain to market a few times a year. To service this mare a pony was brought in from outside. There were water buffalo and "yellow cows" used for plowing and harrowing, enough for the needs of all households in each family group. The milk was not drunk by the people. Dogs were used for guarding and as scavengers. There were a number of cats. Every household had chickens and most of them a pig. There were also several caged pheasants and two households had pigeons. Some of the young men had caged thrushes which they brought out in the spring to sing against one another (fig. 17, *e*). They would also whistle to them to make them sing. A number of these were taken in their cages to the spring bullfight near Yang-niu-ts'un.

Chickens, dogs, and cats went where they wished, except into the grain on the mats, but stables or pens were provided for the other animals. Ducks and geese were driven to the pond in the morning, watched, and brought in again at night. Pigeons roosted under the eaves. Pheasants were kept in large wooden cages in the doorway.

Not every household had cows and water buffalo, but closely related households worked first one and then another field belonging to the group, so that there were enough draft animals for all. The most well-to-do household had four water buffalo and two cows.

Division of Labor. It will be seen from the discussion of Agriculture, that the lion's share of the work fell to the women. Only

4:Mickey E-5 (1940-?)1947 AE5 Miao AE5

462 and transporting it therefrom. They helped
241 with the carrying out of grain and carrying it in again at night, when it had been sunned on the mats.

462 One or two men swung the large wooden
252 mallets by means of which glutinous rice paste was beaten in a stone mortar to the right consistency for shaping. Men did the butchering of animals. They did most of the cutting of tobacco and the making of its leaves into festoons for drying.

462 Men worked in large groups to bring the
342 stone for a building's foundation, transport,
412 bark and trim the logs, and from them make planks and beams. They fitted them together according to the directions of a head carpenter and set up the frame. They did the roofing of houses, whether the laying on of thatch or the placing of tile. They also made articles of wood, such as the wooden parts of some tools and implements, water casks, and buckets, and of bamboo, such as baskets, scoops, and mats. There were no special craftsmen in the village other than those who were especially skilled in the making of wooden and bamboo articles. When a building was constructed the owner made the stone foundation and other villagers barked the logs, sawed the planks, shaped the pieces of the frame, assembled it under the direction of one old man. Men might be called in from other villages for this work. In Yang-niu-ts'un local men not only did the work of building a new house but also made articles needed in it.

462 Men sometimes took charge of children,
855 even to carrying a baby on the back while plowing. They were apt to be more indul-
622 gent than the mothers and the children en-
875 joyed being with them. Contacts with the outside world, other than a certain amount of
648 buying and selling and social visiting with other Cowrie Shell Miao, were carried on by the men. Certain men of the village were heads of a *pao*, ten families, the smallest division in the Chinese political system of the district, and one older man with leisure and education was the chief of these. Small matters came before them, and only when they could not settle a matter was it taken to the *lien* (group of) *pao*, perhaps even to the *hsien* officials. Two men in this village have been teachers in the local school.

8: Graham E-5 (1921-1936) 1937 AE5 Miao AE5

available but this is only for about half the year. Eggs are eaten or / on special occasions.[5]

The Ch'uan Miao are an agricultural people. They are all sons of the soil and get their living from the soil. Even those who are blacksmiths, carpenters, masons, hunters, priests or shamans have farms, sometimes owned but generally rented, and they depend primarily on farming for a living. Sometimes there are houses that are only a few rods apart but I have not seen or heard of a single Ch'uan Miao village or a locality that could boast of a single street.

In former days when land was plentiful and forests were abundant, a man often got his farm by cutting down the trees in a forest and later, when the wood was dry, burning off the trees and grass. This, of course, left a rich virgin soil. After a few years the land became less productive and the owner deserted it and made another clearing. Later the deserted land could again be used profitably. There are no longer such unclaimed virgin forests so that the Ch'uan Miao are obliged to keep their farms productive by means of fertilization.

The domestic animals and fowl are cattle, horses, water-buffalo, mules, donkeys, sheep, goats, dogs, cats, chickens, ducks and geese. Horses are not used for plowing but as riding and pack animals. Water-buffalo are generally used for plowing and harrowing in the rice fields while cattle are used in the dry fields and gardens. Mules and donkeys are less common than horses. There are many sheep in Yunnan Province but few in Szechwan where goats are more common. Every family has at least one watch-dog and there is a special breed of hunting-dogs. Cats are kept in families that are not too poor to afford them. Chickens are found in nearly every home but ducks and geese are less common. There are fewer water-buffalo and more horses and cattle among the Ch'uan Miao in Yunnan than in Szechwan. Cattle, horses, mules, donkeys, sheep or goats, pigs and water-buffalo are kept in barns that are near houses or are actually parts of the houses. Cats, dogs and chickens sleep inside the houses where they roam about unrestrained.

The farming implements do not differ from those of the Chinese. The same plows, harrows, hoes or mattocks, sickles, flails, and so on are used. The plow consists of a naturally crooked tree to which are attached an iron point and a wooden

5. R. G. Agnew investigated the diet of the Ch'uan Miao near Lo Piao and found that malnutrition was quite noticeable in most families and is a fundamental cause of the high death-rate, especially of children. He recommended that eggs be eaten for phosphorus and albumen, milk for minerals and vitamins, fruit for vitamin C and soya beans and vegetables for minerals and vitamins.

8: Graham E-5 (1921-1936) 1937 AE5 Miao AE5

handle. The harrow is made of thick boards or beams through which iron spikes are driven. The hoe, pick or mattock has a long wooden handle and only one point. The sickle used for reaping has a short wooden handle and a curved iron blade. Rice is threshed by holding a bunch of the rice straw in the hands and beating the heads on the inside of a large wooden box into which the grain falls until all the grain is beaten off the stalks. Wheat and oats are threshed by means of flails by men or women who strike the grain in succession. The plow can be used in the rice paddies and on other level fields but much of the land is so steep that it can be cultivated only by means of the hoe. Some of the land is so steep that it cannot be cultivated. This is a valuable source of supply for firewood, lumber and medicinal herbs and is useful as pastureland.

The houses are built like those of the Chinese. The roofs are made of straw or of reeds or more rarely of tile. The walls may be of beaten clay, of cornstalks tied together, of bamboo strips woven together and plastered with clay, and this possibly whitewashed, or of lumber. The simplest houses are oblong, consisting of one or two rooms. Sometimes there are no windows in the smallest and simplest houses and only one or two doors. As the houses vary in size and complexity, they may be oblong or triangular and consisting of two sections at right angles to each other, or of three sections with two parallel sides and a third section joining them across their ends or they may have four sides enclosing an open court or "heavenly well." There is only one story but sometimes there is a loft with or without windows.[6]

Some people live in natural caves. They are the poorest folk who cannot afford to make or to purchase homes. The legends indicate that in the past cave-dwelling was much more common than it is to-day. In times of war or when brigands approach, many families move into caves which serve as strongholds until the danger is past. Only natural caves are used in this way but many of them have been artificially improved so that they are almost impregnable.

There were formerly many fortified places called in Chinese *chai tzŭ* 寨子 where groups of houses were clustered together for protection. This is indicated by the names of places such as Wang Wu Chai 王武寨 and by the frequent references to fortified places in the legends. To-day there

6. People do not sleep in the loft. There they store their rice, corn, beans and other grains and baskets, rain hats and tools. In the poorer homes the windows are small square holes with vertical slats of wood or bamboo to keep out birds, animals and people. The best houses have wooden lattice windows made by Chinese carpenters.

8: Graham E-5 (1921-1936) 1937 AE5 Miao AE5

804 The Ch'uan Miao are acquainted with and frequently use the Chinese system of measurements by which ten inches make one foot and ten feet are one *chang* 丈. But they have a variation of this system which is more commonly used by them. According to this method the distance between the first and the second joints of the middle finger is one inch. The stretch of the hand from the end of the thumb to the end of the middle finger is five inches and two of these are one foot. The arm stretch from the tip of one middle finger to the tip of the opposite middle finger is five feet and two of these are one *chang*. In some localities bamboo combs are used to measure cloth.

805 The method of reckoning time is that of the Chinese from whom it was evidently learned. A month is called a moon. There are twelve lunar months in one year and sometimes thirteen. Each month has thirty days and is divided into three periods of ten days each. Through the Chinese the Gregorian calendar is becoming known.

436 439 There are localities where the Ch'uan Miao barter a great deal because of the shortage of money, the differences being paid in cash. This is more common in northern Yunnan than in Szechwan where market-places and towns are more accessible. The Ch'uan Miao sell cattle, goats, sheep, horses, pigs, chickens, corn, rice, eggs and vegetables and purchase salt, cloth, silver ornaments, pottery and implements and tools made of iron.

352 The furniture corresponds to that in the Chinese homes. The most essential articles are the square tables and the long narrow four-legged stools called in Chinese *pan têng* 板凳. Chairs are to be found in the well-to-do homes. The cheaper kinds are made of bamboo but better chairs are made of wood by Chinese carpenters and carved with Chinese ornamental designs. A bedstead consists of a wooden frame and four legs of wood, covered with a mat of bamboo slats over which there is a layer of straw. A straw matting may or may not separate this from the bed clothing. Above the more elaborate beds are frames of wood or bamboo on which mosquito nets are hung. The stove may be a hole in the ground, which is said to be the oldest form, but it is generally like that of the Chinese, made of clay and stones or bricks, and with holes for one or more cooking vessels. The meat, rice and vegetables are cooked in the iron cooking vessel called in Chinese a *kuo* 鍋. There are usually tongs made of bamboo or of iron and small iron shovels, bamboo brushes and strainers. The lamps are usually simple, earthenware, cup-like bowls that can be hung up on posts or on the walls of the house, in which is burnt *ts'ai yu* 菜油 or rape seed oil.

[412] [373]

10: Graham E-5 (1921-?) 1954 AE5 Miao AE5

beds, and chairs. The stoves are generally, like those of the Chinese, of clay and stones or bricks, but sometimes one is seen that is merely a square hole in the ground, a continuation of a very ancient custom.

The principal tools and utensils, which are like those of the Chinese, are the plow, the curved sickle for cutting grass and wood, the hoe or pick, the ax or hatchet, the hammer, saw, knife, spoon, ladle, rice-steamer, loom, and the iron pot or cooking vessel.

The domestic animals are the horse, mule, donkey, water buffalo, cow, pig dog, cat, sheep, goat, chicken, duck, and goose.

The principal food is corn meal cooked like porridge, but those who are able to get it eat rice. This diet is supplemented by vegetables, meat, and wild fruit and berries found in the woods. The investigations by Dr. Gordon Agnew showed that many Ch'uan Miao suffer from malnutrition.

Women weave cloth on home-made wooden looms, and they generally do the cooking. Both men and women work in the fields, but only men do the plowing. Sewing and embroidery work are done by women and girls. Hunting is a popular pastime of men and boys, especially during the winter months when there is little farm work to do.

Formerly most of their clothing was made of hemp cloth, which was undyed and therefore white, woven on their looms by the women. This evidently explains why they were called "White Miao." Whether the Ch'uan Miao belong or have belonged to the White Miao group of southern Kweichow is a problem yet to be solved. Today much of their clothing is made of blue cotton cloth bought from the Chinese.

In former years the clothing of the Ch'uan Miao, both men and women, that was worn on festive occasions and often to markets was beautifully embroidered and colored. Some of the embroidery, such as that of the handkerchiefs, is like that of the Chinese peasant's cross-stitch embroidery, but most of it, and that which is finest and best, includes beautiful designs found widely among non-Chinese people in southern and central Asia, extending even into central Europe. The best skirts of the women are pleated and dyed in a manner resembling somewhat the batiks of Java. The Ch'uan Miao men no longer wear embroidered garments, and the women are imitating, to save time, the coarser of the Chinese embroideries. This is bringing about the loss of a fine and beautiful art.

SOCIAL ORGANIZATION

The family is the social unit, and the Ch'uan Miao family closely resembles that of the Chinese. The oldest male is the head of the family, and all his descendants, except married daughters, and including wives of sons and grandsons, generally live together in the same house. After marriage the woman belongs to the family of her husband. All having the same name are regarded as belonging to the same larger family and are not allowed to intermarry. Filial piety is the cardinal virtue and is expressed in elaborate funeral and other ceremonies.

While the couvade is found among the Hua Miao neighbors to the south, no

[159 cont.]

271 The "Méo" habitually drink water, but they make alcohol
273 from grain (distilled or fermented) which they often drink without the slightest moderation.

They smoke tobacco in the bamboo water pipe or in the long
276 pipe [160] with the small bowl and mouthpiece of porcelain, of a model analogous to that of the "Man" pipe.

They smoke opium in a very moderate manner. Big opium smokers are rare among the "Méo" of Upper Tonkin.

[249] Sometimes they cultivate hashish, but never make use of it.

The "Méo" are, above all, farmers and they cultivate upon
241 their mountains the various grains and vegetables enumerated above.
311 They utilize to this end parcels of land capable of growing vegetation, even the tiniest, sides of knolls, shallow basins, clefts in the rocks.

The maize is sown in the fourth month and is spread about on
243 all the parcels which can be cultivated, often by clumps of two or three hills. The ground is scratched very lightly, with the plough or with the hoe. It receives a little manure at the exact spot where the seed will be deposited. The harvest takes place towards the eighth month. It is not unusual to see the fields planted to maize—
249 as we have seen above for certain irrigated rice fields + transform themselves into ground for the growing of opium, which is planted toward the ninth month, after the earth has been mixed with a few ashes. The opium harvest takes place the third month and the ground
[243] again is given over to the cultivation of maize or of sorghum. The buckwheat generally produces two crops a year.

248 The "Méo" also cultivate hemp, to which they consecrate their best areas of ground (bottoms of cirques or of valleys). The hemp is sown the fourth month and reaped the seventh month.

231 The "Méo" keep a few bees. They often have hives whose honey is used in cake-making.

They raise their numerous vegetables either in gardens laid
244 out near their cabins, or in the maize fields at the same time as the maize.

The agricultural implements consist of ploughs of a primitive
412 model with ploughshares of iron, and some hoes. For the harvest,
407 large scythes and billhooks are used.

291 eight ears. The stalks likewise are placed in piles in the fields, and then carried in as needed for bedding for the animals, heating, cooking food, or even building house walls.

The Meo grow little mountain rice and almost never plain's rice. The areas rarely lend themselves to the latter crop. However we have discovered, especially at Gi Chu Phin near Van Bu, magnificent mountain cirques whose slopes were decorated with terraced rice fields up to an altitude of one thousand meters.

A side from hemp, buckwheat, and opium, other crops are planted in the furrows of the fields of maize and among the stalks of that plant. This is done in such a way that the same field may produce at the same time beans, peas, pumpkins, broad beans, cucumbers and a grain called cao lien which serves to make flour and the bread eaten on holidays.

When the maize has been harvested, a crop of buckwheat is sometimes sown in the soil.

249 Opium is sown in November, the poppy seeds being mixed
248 with ashes to protect them from insects. The incisions are made in the plant in April or May, then once all of them have given up their opium, preparations are started for a crop of maize on the same soil.

Hemp is grown at the lowest spot in the cirques, because it requires very deep arable soil. It is sown in April and harvested in
245 July. Sorghum is sown and reaped at the same time as maize. Finally some peach, pear, apple, plum trees, etc., are almost always found around the cabin. Their fruit, although less well flavored than those of France, is still not to be scorned.

286 The Meo make their cloth themselves from the hemp which
462 they harvest. Some of them forge their work tools, spades, plough-
415 shares, pruning-hooks, hoes, etc., and buy crude iron which comes from Yunnan for this purpose. They make their ladles and buckets, furniture, sandals of bamboo fiber, pottery and, in short, all of their farming implements.

252 /140/ To grind maize they use a mill similar to the Coi xay
243 of the Annamese, but larger. The movable mill-stone here is activate
462 by a crank which is articulated with a system of horizontal spokes attached to a strong wooden bar. Three or four women operate this bar by drawing it towards them and away from the mill, and then by pushing it towards the mill. The picture afforded by this exercise is one of vigorous movement. The bodies of these strong daughters of the mountain bending, their return movement which shows a glowing

39: Bernatzik--181 E-5 (1936-1937) 1947 AO1 Thailand
AKha A04
Miao AE5

/131 cont./

M
412
531

Fig. 15. Silver scabbard of the Meau, with spiral design in chase technique. 1/2 nat. size.

A
M
532

from everyday life were portrayed (Figs. 16, 17, 20, and 21). No difference in the talents of the two peoples in this respect was discovered so far as the men were concerned. Accordingly, in the performance of the men of both peoples the decorative fell behind the figurative. On the other hand, the higher development found among the Meau boys (see the chapter, "Life in the Community," section on "Art in the Life of the Children") is also found among the adults.

Miao AE5

/305 cont./

417

Other important pieces of furniture are the ladders, which /Figs. 137-138 appear here/ /306/ lead to the storage lofts. They are either tree trunks provided with notches (Fig. 137) or ladders with steps (Fig. 138). /Fig. 139 appears here./

252
•412

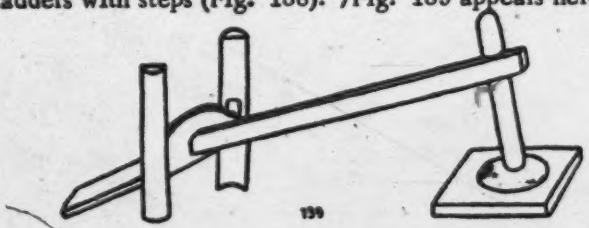


Fig. 139. Grain mortar of the Meau. 1/28 nat. size.

256

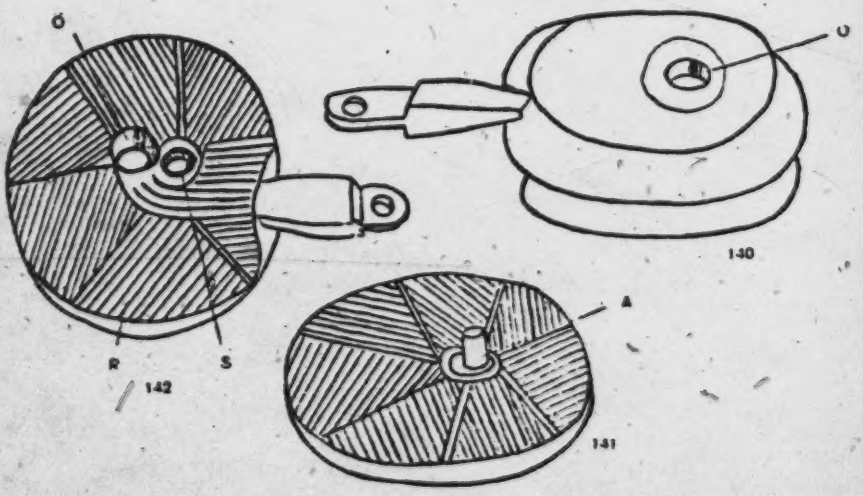


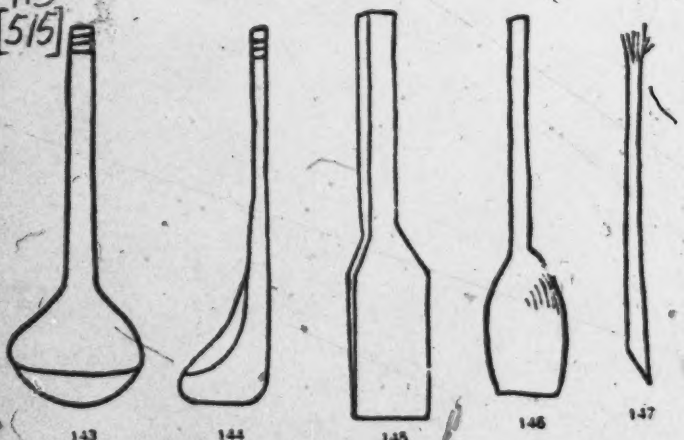
Fig. 140-142. Grain mill of the Meau, 1/10 nat. size. Fig. 140. Millstones, joined. Fig. 141, lower, and Fig. 142, upper millstone. O = opening for pouring in the grain, R = grooves, S = hole for pivot A.

/306 cont./

412 252 [243] [244] 256 The household and kitchen implements of the Meau are very numerous. As was mentioned, all the grain and leguminous products are husked in the foot-operated mortar built into the cooking area (Fig. 139). /Figs. 140-142 appear here./

/307/ For grinding the kernels of grain and maize the large mill shown in Ill. 94 and Fig. 140 is used. The lower-millstone half (Fig. 141) is immovable and is provided with an axle (A), which is fitted into the opening (S) of the upper stone (Fig. 142). Both millstone halves are provided with grooves (R), which run in various directions. The upper eccentric millstone (Fig. 142) is connected with a horizontal pole. When this is swung forward and backward, the movable-millstone half turns. In this, on the top, a hole (O) is chiseled out, through which the grain is poured in. According to whether one lengthens or shortens the

415 [515]



Figs. 143-146. Dippers and Ladles of the Meau. Fig. 143. Bamboo dipper. Fig. 144. Side view of the same, 1/5 nat. size. Figs. 145 and 146. Wooden stirring ladles, 1/10 nat. size. Fig. 147. Toothpick, 1/3 nat. size.

1 [see cat 116, p644 - ANALYST]

/307 cont./
256 axle which connects the two millstones to each other, it is possible merely to husk the kernels, to grind them up, or to mill them into a coarser or finer flour.

415 As cooking utensils, iron kettles (Ill. 106)[1] and pans are
439 used, all of which are bought from Chinese traders and represent marketable trade items. Lajonquière (1) gives the

1. II, p. 303.

same description. Tea kettles of iron or brass are also present in all sizes, as are little porcelain bowls and plates of Chinese design, which come from the same source. /Figs. 143-147 appear here./

415 /308/ In addition to bone chopsticks and the Chinese
412 dishes, homemade wooden plates and wooden ladles, as well as wooden or bamboo dippers are used (Fig. 143-146). To be
515 mentioned here also are the toothpicks, or rather toothbrushes, which are used every day and which are nothing but small wooden sticks frayed out at the top (Fig. 147).

415 The large iron pot (Fig. 148) in which meat or vegetables
252 are cooked is always standing on the hearth. Rice, however, is /Figs. 148-155 appear here/ /309/ cooked in a brass pot used for only this purpose, which usually has the shape shown in the drawing (Fig. 150). To dip out the cooked rice,
[251] strainers (Fig. 151) are used; to store it, special rice-pots of wood (Fig. 152). Moreover, for steaming, wooden vessels are used (Figs. 153-155), whose manner of utilization is described in the chapter, "Food and Stimulants. Other cooking
412 utensils (Fig. 156-174) of the Meau are: wooden forks, wooden
415 blocks for chopping meat, wooden troughs, wooden mallets
252 carved out of forked branches for pounding dough, wooden cutting boards, various knives, peculiar wooden vessels with a carrying handle for scooping up pig fodder, variously shaped
[273] gourd dippers and gourd bottles, strainers, graters, scrapers to remove the maize kernels from the ears, vessels for distilling

[1] [See cat 116, p706- ANALYST]
[Text continues on p421]

415 /309 cont./
[412] alcohol, purchased earthenware pots in all sizes, and the various
[252] bamboo vessels which stand leaning against the wall near the
[273] hearth or hang on the wall and serve for the storing of the food-
[251] stuffs used daily. They are usually carefully closed with leaves and contain fat, salted vegetables, salt, and other spices. Water stands available in long bamboo containers. These pieces of bamboo, freed of the partitioning walls, represent indispensable
[312] vessels used in many ways (Ill. 105).[1] For carrying water, several
[482] are often bound together and carried on the back or in carrying baskets. Abadie (1) reports in similar fashion.

1. Page 160.

412 For sweeping out their dwellings, brooms (Fig. 175) are used, which are made out of tough grasses tied together in bundles. A clothes roller (Figs. 176 and 177) consists of a
412 wooden roller (A) similar to our rolling pin, around which the
296 washed clothes (B) are put while still wet. Then a heavy stone (C) is rocked in a seesaw motion on the clothes wrapped around it, by means of which they are freed of the remaining water and are smoothed.

482 For carrying firewood and other heavy loads, the Meau use special carrying frames (Figs. 178 and 179), which are carried on the back in the manner used in our Alpine countries. These carrying frames come in different sizes for men, women, and children (Ill. 104).[2]

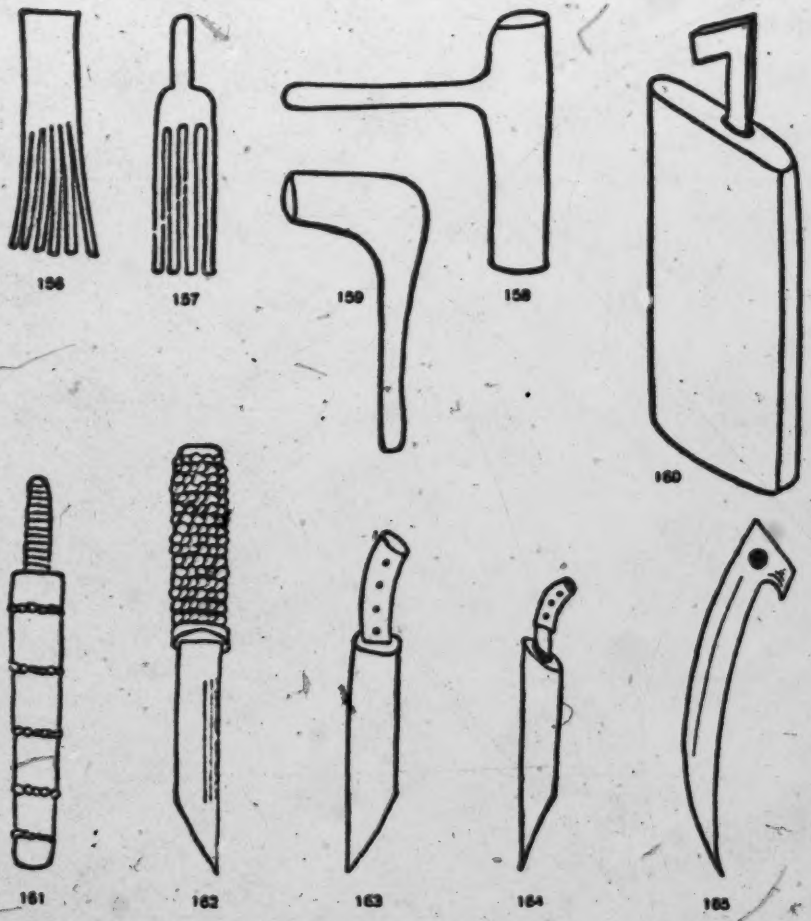
One half of this wooden frame is provided with a tight plaiting of narrow /310/ /Figs. 156-165 appear here/ bamboo strips (Fig. 180). Broad carrying straps of leather (C) are attached to the inside of the wooden frame (A). The two ends of the carrying frame are connected by means of a forked branch (D) and a tightly /311/ /Figs. 166-177 appear here/ twisted rope attached to it. Between this and the plaited wall of the carrying frame (B) the load is now stowed and fastened by means of the rope (Ill. 93).[3]

1 [See cat 116, p705 - ANALYST]
2 [" " " , " "]
3 [" " " , p643 - "]

39: Bernatzik--422 E-5 (1936-1937) 1947 AO1 Thailand
Miao AE5

Figs. 156-165. Kitchen Utensils of the Meau.

412



[413] Fig. 156. Wooden fork for making powder. Fig. 157. Wooden
[289] fork for making paper, both about 1/10 nat. size. Figs. 158
and 159. Wooden mallets for pounding dough, about 1/6 nat.
[274] size. Fig. 160. Cutting board for tobacco, 1/5 nat. size.
Figs. 161-164. Knives with iron blade, wooden handle, and
wooden sheath. Fig. 161 = 1/5 nat. size. Fig. 162 = 1/5 nat.
size. Fig. 163 = 1/5 nat. size. Fig. 164 = 1/7 nat. size. Fig. 165.
[289] Bone knife for making paper, 1/4 nat. size.

39: Bernatzik--423 E-5 (1936-1937) 1947 AO1 Thailand

Miao AE5

Figs. 166-177. Kitchen Utensils of the Meau.

415

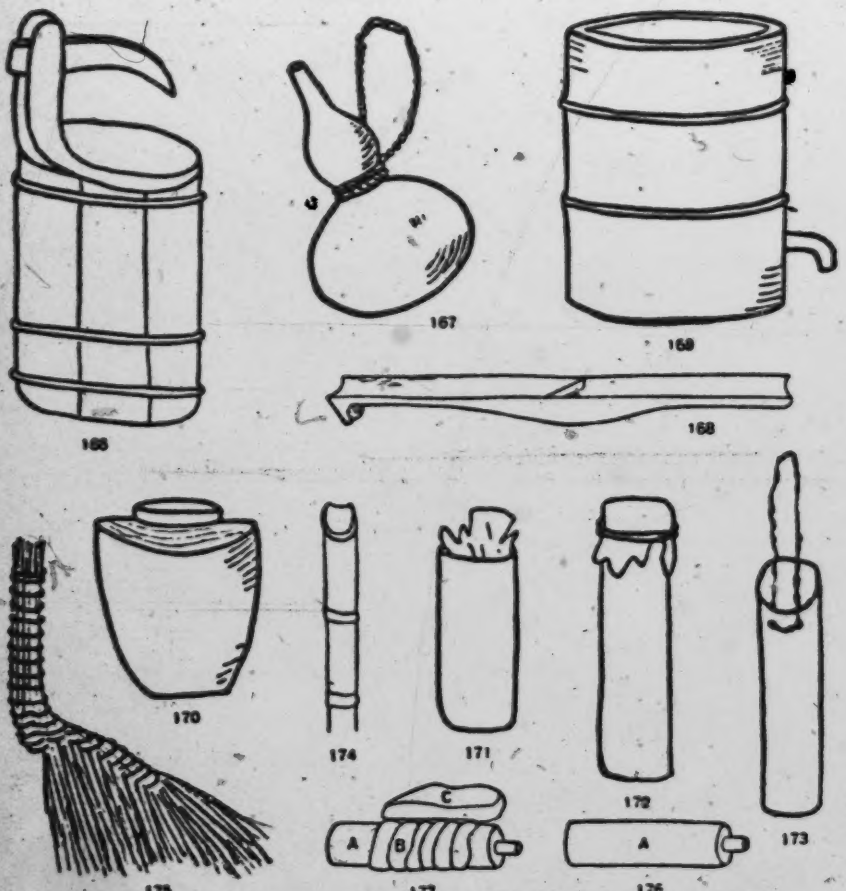


Fig. 166. Dipping vessel for pig fodder, 1/5 nat. size. Fig. 167. Gourd bottle, 1/5 nat. size. Fig. 168. Maize-sheller, 1/4 nat. size. Fig. 169. Distillation vessel for making alcohol, 1/18 nat. size. Fig. 170. Earthenware pot with grooves, 1/15 nat. size. Figs. 171-173. Bamboo vessels for foodstuffs, about 1/10 nat size. Fig. 174. Bamboo as water container, about 1/30 nat. size. Fib. 175. Broom, about 1/16 nat. size. Fig. 176. Clothes roller (mangle), empty, about 1/20 nat. size. Fig. 177. The same in use.

[412] [273]

[412] [296]

AKha A04
Miao AE5

/312/

M 285 482 415 Especially numerous are the household inplements of plaited material; above all, the many shapes of the baskets are to be stressed. There are carrying baskets in all sizes, double-walled for heavy loads, loosely plaited for light loads (Ill. 93),[1] large supply-baskets for the storing of /Figs. 178-180 appear here/ food, clothing, and cloth, chicken baskets, small carrying baskets and carrying bags for traveling; moreover, mats for sleeping, for threshing of grain, for covering food, the wide fish-nets, basket weirs, flat rice-baskets and strainers; and also knotted bags and fish nets. All these articles are described in detail in the chapter, "Handicrafts."

M 128 276 ● 412 /313/ The description of the various opium implements (Ill. 74),[2] which are numerous in every household, all the / agricultural and smithy implements, and the work tools and cult objects, musical instruments, weapons, and so forth is contained in the appropriate chapters.

A 342 The division of the Akha house into cooking, living, and sleeping rooms is shown in the ground plan, /Fig. 91 (see the chapter, "Settlement and House Construction"). /Figs. 181-183 appear here./

A 354 [252] [562] The fireplaces of the Akha (Fig. 181) are square boxes which are filled with earth. They are sunk into the floor of the living room (chapter, "Settlement and House Construction," Fig. 105, R). An iron tripod (Fig. 182) for the cooking pots stands on the ground surface, which is level with the floor. These fireplaces, one of which /314/ is for the men and the other for the women of the house, are used for heating the house as well as for cooking. Moreover, as has been mentioned, in each house there is a hearth for cooking the pig fodder (Fig. 183). This hearth consists of mound of stones which is enclosed on the outside with plaited bamboo. On this stone ring stands the iron basin under which the wood fire burns.

A 372 Fire is made, as among the Meau, with flint and iron (Figs. 119-122, chapter, "Household and Kitchen Utensils"). Dry wood dust is used as tinder.

[1] [sec cat 116, p 643 - ANALYST]
[2] [" " , p 573 - "]

/324 cont./

291 the women and the size and shape of the collar vary according
[184 to age and social position. He further maintains that some-
[554 times, too, the clothing of the men is decorated with em-
[531 broidery and colorful lacing, like that of the women. /Figs. 209-210 appear here./

302 Tattooing, like body painting, is unknown among the Meau.
[304 The headdress of the girls and women among the Meau is completely uniform. The long straight hair is combed upward in the back and twisted into a knot above the forehead (Ill. 87).[2] Since it is regarded as especially beautiful to have as large a hair knot as possible false hair is often twisted into the knot (Ill. 59).[2] Young girls like to wear a wooden comb stuck
[301 in the hair knot (Fig. 209). To comb the hair, women as well
[412 as men use combs with an edge and central piece of wood and teeth of finely split little sheets of bamboo.

I could nowhere find among the Meau visited by me the women's custom of shaving the head as Lajonquière (3) describes

3. II, p. 309.

[756 it. A single exception was the female shaman of a village. This woman wore her hair completely shaved under her turban.

[177 /325/ The headdress of the men is uniform everywhere. In Chinese fashion, they wear their heads shaved for a round spot about six centimeters in size at the back of the head (Ill. 80).[3] The remaining hair is long and is either braided into a tight queue, tied up in a knot, or worn loose (Ills. 52 and 54).[4]

301 Compared with the other Chinese mountain tribes, such
[171 as the Akha, Lahu, Lisu, etc., the Meau wear few ornaments. Nevertheless, the solid silver rings, which are worn around the neck, arms, fingers, and feet, stand out in rich contrast from the dark-blue fabric of their clothing and the colorful embroideries. Quite generally, open, solid silver hoops are worn around the neck (Figs. 211 and 212), which vary in size, weight, and execution, depending on whether they are intended for children, women, or men. Sometimes several neck hoops

[1 [See cat 116, p 620 - ANALYST]
[2 [" " p 448 - "]
[3 [" " p 595 - "]
[4 [See cat 116, pp 365-366, - ANALYST]

/325 cont./

301 are worn over one another (Ills. 52-54).[1] The most common are simple round hoops which are worn open at the neck or are provided with a fastener of silver rings (Fig. 213). Instead of the small silver rings, a silver clasp may also be used to close the hoop, as, for example, in the case of the large neck ring of the shaman, which is illustrated in Fig. 212. Sometimes [789] small charms, powder sewed into black cloth and the like, are attached to the neck hoop for protection against evil spirits (Fig. 211). The two bent ends of the neck hoop are [531] usually provided with incised designs (Figs. 214-216). In [412]

209 210

Figs. 209-210. Combs of the Meau.

Fig. 209. Wooden comb to stick in the hair, about 1/2 nat. size. Fig. 210. Bamboo comb for dressing the hair, about 1/3 nat. size.

addition to these typical solid silver hoops, such neck rings made of iron or copper, or of silver twisted with copper, are also worn (Fig. 217). All of the neck hoops are made by the Meau themselves and are also worn on workdays.

[325] [177] The material for the making of silver ornaments is obtained by melting down the old Indochinese piaster pieces or Chinese silver coins. For a heavy men's hoop nine pieces of mon (which are old Indochinese silver coins) are required.

The earrings of the girls and women -- I did not see any on men -- are likewise made of solid silver. The most common form is provided with an arrow wound with fine silver wire (Fig. 218 and Ill. 60).[2] /326/ I have also often come across the large silver ear-pendants in the shape of reversed question marks, which Lajonquière (1) mentions, among the

1. II, p. 309.

[1] [see cat 116, pp 365-366 - ANALYST]
[2] [" " p 448- "]

Miao AE5

/361 cont./

351 Savina (3): "There are as yet no fruit trees, but that is still
241
245 3. II, p. 185.
114 to come, and, to be sure, next. In the next fruit season one goes to the neighboring villages, stuffs himself with pears, plums, apples, and apricots, 'remembers his mother, sister, and little ones,' and returns home with a full carrying-basket. The pits of these fruits are thrown into the thicket and germinate there. In a few years, fruit trees come up. This is the origin of the fruit trees that are seen around all Meau villages. Not a single one has been planted."

The author's statement that the fruit trees are not planted, but rather owe their existence to the pits haphazardly and thoughtlessly thrown away, cannot be upheld by anyone who -- as I did -- has seen how carefully the Meau select, plant, and tend their fruit trees.

248 I report on plants used in spinning and dyeing in the chapter, "Handicrafts."

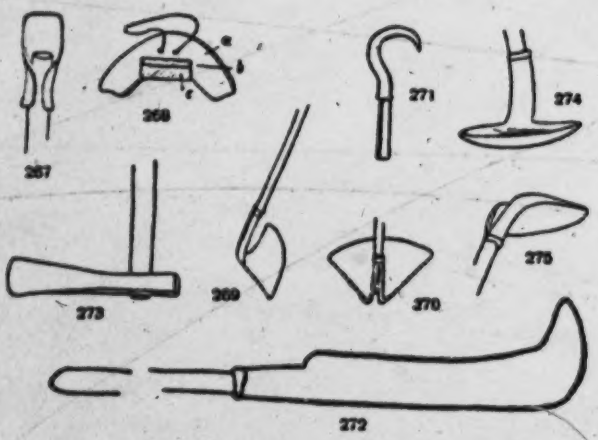
412 The agricultural equipment of the Meau in Thailand will probably be best explained by the drawings. The small
243 crescent-shaped rice-knife (Fig. 268) is typical for the Meau. It is wound around the four fingers of the right hand by means of a string fastened to it, the stalk is seized with the thumb and the third finger, /362/ the cutting edge of the knife is pressed against the stalk with the ring finger and the little finger and cuts it (Ill. 95).[1] These knives vary in size, depending on whether they are intended for children or adults.
412 Other cutting instruments are: sickle (Fig. 271), chopping knife (Fig. 272), and the knife for harvesting poppies (chapter, "Stimulants," Fig. 289). Furthermore, the Meau have at their disposal the ax (Fig. 273), digging stick (Fig. 267), hoe (Figs. 269 and 270), weeding rake (Figs. 274 and 275). The
407 plow, on the other hand, as was described, is not in use among
184 the Meau in Thailand and has already fallen into oblivion, whereas it is still in use among the Meau in Tonkin, in accordance with its geographical feasibility. Abadie (1)

1. Page 310.

[1] [See cat 116, p 645 - ANALYST]

39: Bernatzik--492 E-5 (1936-1937) 1947 AO1 Thailand
Miao AE5

412 Fig. 267. Digging stick, 1/9 nat. size. Fig. 268. Knife for harvesting rice: a = wooden frame, b = copper fastening, c = iron blade, about 1/4 nat. size. Fig. 269, hoe, from the side; Fig. 270, the same from the rear, 1/27 nat. size. Fig. 271. Sickle, 1/9 nat. size. Fig. 272. Chopping knife (jungle knife), 1/8 nat. size. Fig. 273. Ax, 1/8 nat. size. Fig. 274, weeding rake from the front; Fig. 275, the same viewed from the side, about 1/6 nat. size.



Figs. 267-275. Agricultural Equipment of the Meau.

Akha A04
Miao AE5

M 264 [262] [412] [574] [562]

/377 cont./ however, they take something along in order to eat at noon. The meals consist of some coarse maize dough in a bucket, some beans, and some vegetables. Spoons or chopsticks are used. Only on festive occasions is meat eaten. Some pork is always smoked and saved for important guests."

Meals are eaten together, except when strangers are present as guests (Ill. 106, 107): even for the cold snack in the fields all sit down together.

A 262

No differently than the Meau, the Akha, too, in addition to their domestic animals and cultivated plants, use a great number of wild plants and all kinds of animals for food. Of the birds /378/ they disdain vultures and ravens, but not the hornbill. They also do not eat the numerous lizards ignored also by the Meau, as well as the larvae of flies, but on the other hand they do consume dogs, which are not eaten by the Meau.

A 252 [462]

The preparation of meals among the Akha is likewise clean, but it differs in several ways from Meau cooking, while being related to it in the principal features. Among the Akha, too, it is usually the women who prepare the food, but the men very frequently help.

As a rule, the Akha cut meat into small pieces and cook it in water; they also chop it up, season it with spices, and then consume it raw. Curdled blood or the entrails of animals are prepared and eaten in the same way. Cooking pits and heated stones are also unknown to the Akha. Besides lard and the suet of the hunting booty, and in addition to the fats, the seeds of a sesame-like, oily plant must be mentioned. They are used in connection with offerings and simply by adding these seeds to the rice before it is cooked (see the chapter, "Religion and Magic," the section, "Cult and Taboo").

A [782]

A 251 [262]

The basic foodstuff among the Akha is likewise rice, which is eaten at every meal. First of all it is freed from the husks and cleaned, and then it is ready to be cooked. Among the Akha its preparation is different then among the Meau. They soak it in water overnight and then cook it in the same

[see cat 116, p 706 - ANALYST]

/381 cont./

276 [439] [412] Furthermore, opium plays a very important role, both as a stimulant and remedy and as an article of trade (see the chapter, "Trade"). When the poppy fruits are almost ripe, they are slit with a special instrument, the poppy-slitting knife (Ill. 73 and Fig. 289). This consists of three iron blades tied together. The three sharp points of the combined blades are used to slit the capsule, from which a gummy juice flows out. By the next morning it has hardened and is now collected in gourd bowls with a scraper (Fig. 290). This substance is then pressed into bamboo vessels and left for two or three days, whereupon it exudes water. Now it is kneaded and pounded in mortars and rolled into cylinders, which are wrapped in paper. This produces the raw opium, the /382/ /Figs. 289-298 appear here/ article of trade. For one pound the Meau receive 18 ticals from the Chinese traders; the traders then make a profit of many hundred times this amount.

[439] [435]

In order to make the ardently desired stimulant from this raw product, it is boiled three times in water in special copper kettles (Fig. 291). For the first cooking, one adds water to the opium in the amount of ten times the weight and cooks it until the opium mixes with the water and forms a homogeneous substance. Then the liquid is filtered through a double layer of bamboo paper (Fig. 192). To the extract obtained, fresh water is added in the amount of 50 per cent of its quantity, the filtered residue is likewise mixed in, and the whole is boiled anew and filtered again. The filtration residue is now thrown away, and the liquid obtained is boiled until it forms a viscous mass which, for trading, may be boiled down until it is quite hard.

[439]

The drug is swallowed with water by the Meau, as well as smoked in Chinese fashion, but not chewed. Older men usually eat some opium in the morning but smoke a pipe in the evening. For this purpose the proper amount is /383/ speared on a needle (Fig. 293), then heated over a small lamp (Figs. 294 and 295) until it becomes soft (Ill. 74), and then stuck into the opium pipe (Fig. 296) which is smoked.

[See cat 116, p573- ANALYST]

39: Bernatzik--519 E-5 (1936-1937) 1947 AO1 Thailand
Miao AE5

276
415
412

Figs. 289-298. Opium Apparatus of the Meau.

Fig. 289. Knife for slitting poppies, 1/8 nat. size. Fig. 290. Poppy scraper, 1/6 nat. size. Fig. 291. Copper kettle, 1/6 nat. size. Fig. 292. Plaited strainer with filter paper, 1/6 nat. size. Fig. 293. Iron needle for putting the opium into the pipe, 1/6 nat. size. Fig. 294. Opium lamp: a bamboo container, in it a brass vessel with a candle, 1/4 nat. size. Fig. 295. Perforated iron cover, which is put over the opium lamp, 1/4 nat. size. Fig. 296. Opium pipe of bamboo, 1/6 nat. size. Fig. 297. Bamboo vessel for straining opium, 1/10 nat. size. Fig. 298. Feather brush with wooden handle, for cleaning the opium kettle, 1/7 nat. size.

Miao AE5

/386 cont./

411 Among the offensive weapons of the Meau, there were formerly spears, which have been retained today in crude [115] form only very sporadically. One of my interpreters, a Chinese trader, whose calling took him from one village to another, reported long thrusting spears with a double-edged, poisoned iron-point which was attached to a wooden shaft about four meters long. Even my best informants, however, could not [175] remember such spears. In the old Chinese literature the use of long spears is mentioned several times (2). Furthermore, wooden

2. Eberhard, II, pp. 245, 252, and 259.

clubs were used, which, however, are no longer found anywhere today. This /387/ club, round and about as thick as a thumb, with an egg-shaped handle, was made flexible at two points by the insertion of three chain links at each one.

As weapons for close combat the rice sickle (Fig. 271) is used, which for this purpose is equipped with a handle of about one and a half meters.

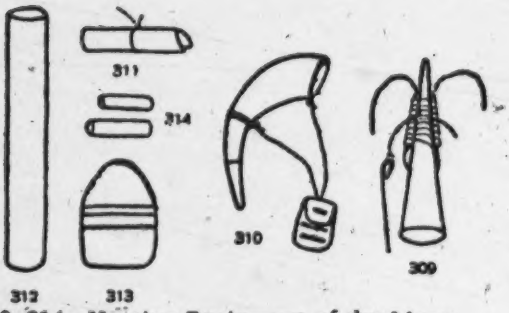
In addition, peculiar slings are used. They consist of perforated iron balls of about six centimeters in diameter, which are attached to a thin rope 20 fathoms long. One now grasps this rope half a meter behind the iron balls, whirls them in a circle, and lets them fly. When this sling has hit its target, it is pulled back by the rope.

On the other hand, there was no device for throwing spears. Nor were bow and arrows or battle-axes used, though [412] in close combat the Meau use their wood ax (see the chapter, "Means of Subsistence," Fig. 273) as a weapon.

411 One finds small knives (see chapter, "House Furnishings, 412 Household and Kitchen Utensils," Figs. 161-164) in daily use, which, in case of war, are used as pointed weapons in close combat. /Fig. 305 appears here./ The large bush knives (see the chapter, "Means of Subsistence," Fig. 272) have versatile utility as a jungle knife and as a hunting and war weapon, as does the slightly curved, double-edged saber with a thin blade.

39: Bernatzik--528 E-5 (1936-1937) 1947 AO1 Thailand
Miao AE5

411
415



Figs. 309-314. Hunting Equipment of the Meau.

Figs. 309-311. Powder containers: Fig. 309, copper powder-horn, on which hangs the iron needle for cutting through the powder channel, 1/5 nat. size; Fig. 310, powder horn (goat horn) set with copper bands and with copper rings for the attachment of the carrying cord, end piece can be removed, 1/13 nat. size; Fig. 311, bamboo container for gunpowder, 1/10 nat. size. Fig. 312. Ramrod of iron, 1/22 nat. size. Fig. 313. Cloth bullet-pouch, 1/20 nat. size, is also visible in Fig. 310, hung on the powder horn. Fig. 314. Iron bullets, about 1/2-1/8 nat. size.

[237]

Fig. 315
Wooden peg of the Meau for pounding gunpowder, 1/18 nat. size.

412
389

/401 cont./
283 string is produced from the thinner one. Heavy cord is obtained by twisting in rattan fibers by means of a wooden fork.
[237] The Meau twist strong ropes out of strips of skin, those of bearskin being regarded as the strongest.

/402/ In addition to the twisting process, braid-like ropes,
[492] bands and wide belts for the saddles of the pack animals are also plaited. For this purpose the Meau use three to twelve threads each time. This plaiting is done solely with the hands
[412] and without any tool; only in the making of straps are iron awls used for preliminary piercing.
286 The ancient Chinese literature (1) already mentions re-

1. North China Br., 1859, p. 264; Ch Hch'kfsch, Vol. II, Ch. 10, p. 38.

peatedly that the Meau are good spinners, weavers, and dyers. For the manufacture of the cloth for clothing, the Meau primarily use hemp, rarely cotton. They sow hemp (măn) in their
248 rice and poppy fields. Lajonquière (2) likewise mentions hemp

2. II, p. 311.

in Indochina and writes that the Meau there cultivate it at the same time as maize and harvest it six to seven months after the sowing. The fibers of banana leaves, on the other hand, were never used, according to my observations and findings. And
[114] since I could find nothing about this anywhere else, a mistake by Seidenfaden, who reported on it, must be assumed. Cotton is cultivated in special fields and is used in a fashion similar to that among the Akha (see pp. 441 f.).

The hemp seed is set out with the planting stick among the Meau in northern Thailand; the period of cultivation falls between the end of April and the beginning of May; the harvest is about three months later. The stalks are cut with the sickle, the leaves are removed, and then the stalks are placed in water
[283] so that they will rot. Afterward they are dried, and the woody

/405 cont./

386 batik pen exactly opposite the way that we hold our pens (Ill.
531 86).[1] She begins at the edges of the piece of material to draw the border, then the middle lines follow, and finally the areas between the border and the middle lines are filled in. After the wax drawing is completed, the dipping of the piece of material into the dyeing trough is begun and continued until the areas left free of wax are dyed dark blue. Now the cloth is boiled in water, which removes the wax, and the places previously covered with it, which of course were not dyed, now appear white or light blue.—Fabrics are produced for the purpose of making clothing; carrying [415] bags made of cloth are rather rare among the Meau since plaited baskets primarily serve for this.

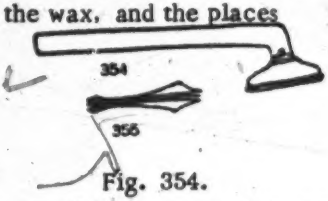


Fig. 354. Batik instrument of the Meau, 1/4 nat. size.

Fig. 355. Tripartite Batik Pen, viewed from below, 1/2 nat. size.

[413]

281 The dressing of leather is unknown to the Meau, although
[513] hides scraped clean on the inside and dried in the sun are
[411] sometimes used as sleeping mats or to cover wooden sheaths for
[262] knives and cut into strips for straps. The hair is always left on the skin. Since, however, hides are preferably eaten, indeed as special delicacies, after suitable preparation (see the chapter, Food and Stimulants," the section, "Food"), such "skins" are very rarely seen in the houses of the Meau.

322 On the other hand, the Meau are masters at woodworking,
412 although they have relatively few and only simple tools at their disposal. The use of wood saws is unknown to the Meau who are
[177] not extensively Sinicized; only the ax /406/ (see the chapter, "Means of Subsistence," Fig. 273), chisel (Figs. 356 and 357), and wooden and iron wedges are available to them. Two kinds of iron chisels are used: a flat chisel (Fig. 357), and a hollow chisel (Fig. 356). For drilling holes, iron awls (Fig. 358) or very ingenious drills (Ill. 83[2] and Fig. 361) are used. For

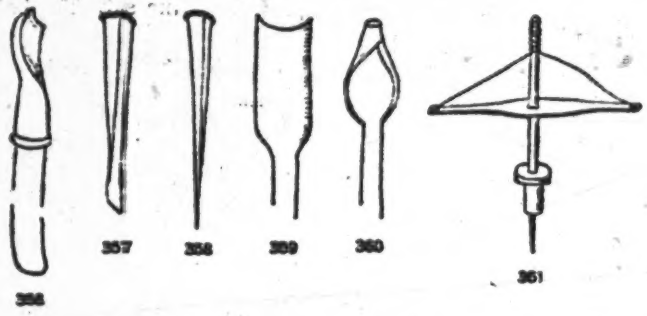
[1] [See Cat 116, p620- ANALYST]
[2] [" " " p597- "]

/406 cont./

322 [412] stamping out spirit-money (see the chapter, "Religion and Magic") round punches (Fig. 359) and hollow punches (Fig. 360) are in use. /Figs. 356-361 appear here./

[824] [313] The posts on which the houses rest are made of termite-proof teak or of pine wood; for all other purposes, regardless of whether it is a matter of building material or wood for the making of implements, termite-proof wood is not used, but rather other kinds of varying hardness. The tree trunks are

412



Figs. 356-358 and 361. Woodworking Instruments of the Meau.

Figs. 359-360. Paper Punches of the Meau.

Fig. 356. Round chisel, 1/6 nat. size. Fig. 357. Flat chisel, 1/10 nat. size. Fig. 358. Awl, 1/10 nat. size. Fig. 359. Round punch, about 1/5 nat. size. Fig. 360. Hollow punch, about 1/5 nat. size. Fig. 361. Drill, 1/20 nat. size.

322 [313] felled with the ax, barked, and split apart into planks with wooden wedges. If it is a matter of wood that cannot be split along the grain, one does not use even the wedge, but cuts a single board out of each trunk with the ax by ripping off one chip after another from either side until a plank of the required thickness is obtained. This is a very laborious procedure, but usually one can select wood that can be split with wedges. In that case the Meau obtain the planks needed for a whole house from a few strong tree trunks.

Miao AE5

/406 cont./

322 Aside from the construction of houses and stables, wood
824 has /407/ an extraordinary number of uses. For example, tables, benches, stools (Ill. 107) 3 and beds, the distillation apparatus for making alcohol, rice mills, rice steamers and pounders, the troughs for the pig fodder, and the pack saddles for the animals (Ill. 81) 2 are made of it; furthermore the handles of tools and knives, sheaths for knives, spear shafts and the gun stocks, crossbows, bellows (Ill. 82), 3 and musical instruments, such as the mouth organ, are produced from it; the altars (Ill. 99) 4 are built out of it; it is likewise necessary for building wells,
[386] and, finally, dyestuff is also obtained from wood.

324 Since the Meau have long since left the Neolithic, stone
[412] tools are no longer in use, and since the immigration of the
[174] Meau into their present habitation area in northern Thailand took place only a few decades ago, I could no longer find any such material from their early history. On the other hand, even today the Meau work stone into grindstones (Ill. 94) 5 or whetstones. Moreover, from a soft porous stone which they burn out before working, they make the crucibles (Fig. 365)
325 and casting molds (Ill. 82) for silver and copper, since they have a considerable knowledge of the use and working of metals. On the other hand, they are not in a position to obtain metals from ore, nor can they smelt wrought iron, but with the help of their bellows (Figs. 362-364) and a charcoal fire they know how to forge and weld it. They can smelt cast iron
[439] which they obtain from broken pots and pans acquired from the Chinese traders. From this kind of iron, bullets and even implements, such as the shoe of the digging stick (Fig. 267) are molded. For this a mud mold is made of an implement for which one wants to make a new piece, and it now serves for the new casting. Casting by dead mold is unknown to the Meau in Thailand.

The forging equipment (Ill. 82) is of wood, iron, or stone and is entirely made by a Meau smith. It is:

1 [see cat 116, p706 - ANALYST]
2+3 [" " " p596 - "]
4 [" " " p664 - "]
5 [" " " p644 - "]

/410 cont./

321 Among other materials used for handicrafts bone and ivory must also be mentioned. Knives (see the chapter, "House Furnishings, Household and Kitchen Utensils," Fig. 165) and knife handles, are made out of them, and they are also used in crossbows. The chopsticks of the well-to-do are usually made of ivory. [412] [556]

289 Finally, the making of paper is still to be mentioned. Young green bamboo is chopped up, after the outer covering and the pith are removed, into pieces about 15 centimeters long and five centimeters wide. A quantity of wood ashes equal to a fifth of the amount of bamboo /Fig. 373 appears here/ is added and, with the addition of water, is cooked for about twelve hours, during which the water that evaporates is replaced as needed. At the end of this period the bamboo mixture is soft. Then the substance is pounded in order to crush the wood fibers (Ill. 84).[1] At the same time any large or hard particles of wood remaining are carefully removed, and the mass of fibers is further cooked in the same lye solution after liana bark pulverized between stones /411/ has been added. After the substance has reached the proper consistency, it is spread as evenly as possible (Ill. 85)[1] on cotton cloth, which is stretched between wooden frames (Fig. 373), and dried in the sun. With a special bone knife (see the chapter, "House Furnishings, Household and Kitchen Utensils," Fig. 165) the dried and therefore finished paper is carefully lifted off. As was described, it is punched by means of special punches before its use in sacral performances (see the chapter, "Religion and Magic"). [413]

[531]

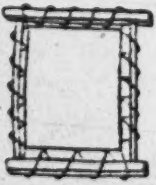


Fig. 373
Wooden Frame for Paper-making among the Meau, 1/60 nat. size.

1 [see cat. 116, p598- ANALYST]

39: Bernatzik--597 E-5 (1936-1937) 1947 AO1 Thailand
Miao AE5

/Between pp. 442 and 443/

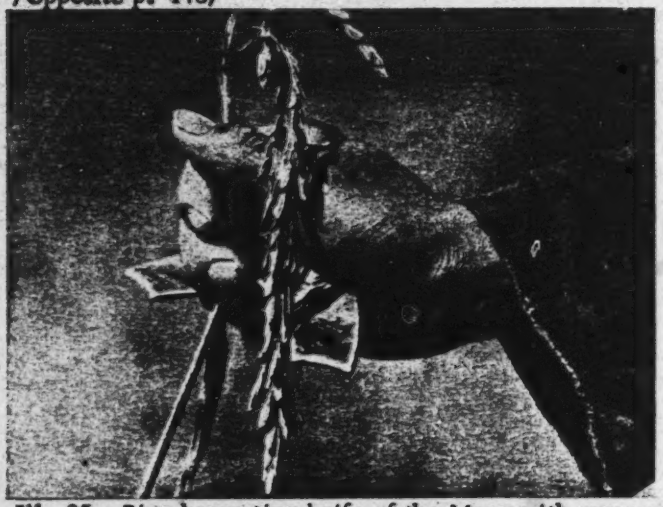
291
322
412
516

Ill. 83. Meau with drill for woodworking.

39: Bernatzik--645 E-5 (1936-1937) 1947 AO1 Thailand
Miao AE5

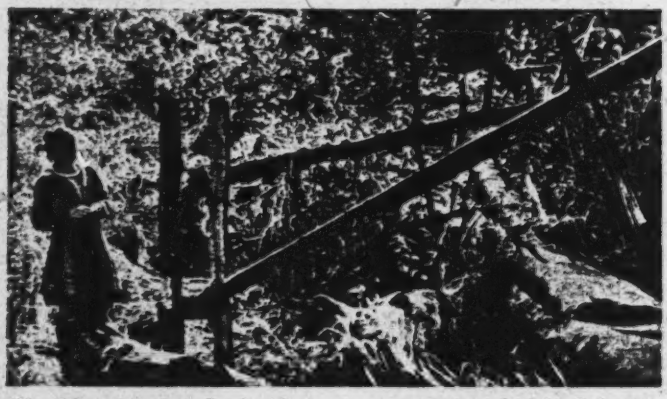
/Opposite p. 475/

243
412



Ill. 95. Rice harvesting knife of the Meau with crescent-shaped wooden handle and inserted metal blade.

243



Ill. 96. Device for hulling rice on a rice field of the Meau.

39: Bernatzik--726 E-5 (1936-1937) 1947 A01 Thailand
Miao AE5

/VII cont./

231 492 Ill. 81. Saddling a pack ox. The Meau breed small, reddish-brown, humped cattle which are good pack animals. Saddles of wood with thick straw or cotton underlayers are used.

/VIII/

Ills. 82-90. Handicrafts.

325 Ill. 82. A smith in his workshop. With the help of a bellows, which he is operating with his left hand, he is just about to melt silver in a stone crucible over a charcoal fire. In the right foreground, the mold is ready. It consists [415] of a cotton-covered wooden frame in the shape of the silver bars desired, and floats in a gourd shell filled with water. Note the tools, all of which have been made by the smith himself.

322 412 Ill. 83. Drill for working wood. By inserting iron drills of different sizes, various holes are made. The work of the hands is aided by the feet.

289 Ill. 84. Making paper for sacral purposes. Bamboo shavings are boiled with wood ashes and then crushed with a wooden club. Larger pieces of wood are removed.

Ill. 85. After the addition of a neutralizing agent, the wood pulp, finally predominantly homogeneous, is poured on cotton cloth and dried in the sun. The finished sheets of paper are carefully removed with a bone knife.

386 531 Ill. 86. Batik work on hemp cloth. With a brass pen, which is lying under the wrist, the pattern is applied in wax. The cloth is then dipped several times in blue dye and dried in the sun. This is repeated until the desired indigo-blue color is achieved. Then the wax is boiled off. The places previously covered with wax now stand out clearly from the dark-blue background.

294 Ill. 87. Girl sewing a new pleated skirt. The Meau girls are excellent and industrious seamstresses. It is particularly difficult to work on the harsh hemp fabric.

/IX cont./

252 256 the two millstone halves with each other is lengthened or shortened, it is possible to hull the rice or maize kernels or to grind them into coarser or finer flour.

243 [412] Ill. 95. Rice-harvesting knife of the Meau. It consists of a semicircular wooden handle with an inserted metal blade. A string over the back of the hand provides the necessary firmness. The photograph clearly shows how the implement is held. The ears are cut individually, row after row. Because of the manual dexterity of the Meau, the harvesting nevertheless proceeds rapidly.

Ill. 96. Part of the rice is hulled in the field. A hole carved in a felled giant of the primeval forest forms the container. The pestle is fastened to a crosspole and is set in motion when one steps on the shorter lever. The axis of the lever arm is fastened between the upright wooden posts.

Ills. 97-103. Religion and magic.

778 Ill. 97. Sacral sign that the shaman sets up in front of the doors of the houses as a sign of a holiday.

787 Ill. 98. Stick oracle. A number of questions are addressed to the spirits. Each bamboo stick signifies a question. All the sticks are bent in a special manner. The answer of the spirits is signified by the position of the upper edge of the bend.

755 787 [756] Ill. 99. Calling back a lost soul. The shaman (left) has thrown oracle horns (the tips of gaur horns) on the ground. Only if these come to rest in a certain way does it mean that the spirits are willing to appear. The magic rattle is on the bench in the foreground. In the background squats the father of the patient, beside whom, on the beam, is the patient, whose soul "has fled beyond the clouds."

[782] Ill. 100. Continuation of the ceremony from Ill. 99. The invoked spirits have given the order to dig a pit in the floor of the house and then to burn spirit-money. The lost soul of the patient is urged to enter the pit. It is then closed with a stone and the soul, it is believed, is caught.